

THE WORLD OF LAPP

eMobility





Welcome









To contact your local Lapp Group representative please visit www.lappgroup.com/worldwide

▶ THIS CATALOGUE IS VALID FROM OCTOBER 2014.

Image source title: Bosch Software Innovations GmbH, ROHDE & SCHWARZ GmbH & Co. KG

Legend for icons

INDUSTRIES

-  Automation
-  e-Mobility
-  Food & Beverage
-  Mechanical and Plant Engineering
-  Oil & Gas
-  Rail
-  Solar Energy
-  Wind Energy

PRODUCT CHARACTERISTICS

-  Good chemical resistance
-  ETIM
-  Wide clamping range
-  Heat-resistant
-  Assembly time
-  Oil-resistant
-  Space requirement
-  Power chain
-  Acid-resistant
-  Reliability
-  Integrated SKINTOP® cable gland
-  Voltage
-  Connector with standard housing unit
-  Interference signals
-  Variety of approval certifications
-  Suitable for outdoor use
-  Flame-retardant
-  Halogen-free
-  Cold-resistant
-  Corrosion-resistant
-  Maximum vibration protection
-  Mechanical resistance
-  Low weight
-  Optimum strain relief
-  Robust
-  Temperature-resistant
-  Torsion-resistant
-  UV-resistant
-  Waterproof
-  Torsion load

Please note: the purpose of the icons is to provide you with a quick overview and a rough indication of the product features to which the corresponding information relates. You can find details of product characteristics in the “technical data” sections on the product pages.



Brand quality from Stuttgart



ÖLFLEX® Power and control cables

The world's first brand cable is available in the most varied of versions to match maximum requirements.

Key features: Oil-resistant, flexible and available to match almost any requirement or environmental condition – also free of halogens.

Fields of application: Multipurpose. Special variants are increasingly in demand in the area of renewable energies.



EPIC® Industrial connectors

The brand for strong and reliable connections.

Key features: Robust square and circular connectors. Flexible system consisting of housings, inserts, contacts and accessories – the tailor-made solution for every requirement. Similarly, EPIC® SOLAR plugs for photovoltaics are also part of the extensive product range. **Fields of application:** Mechanical and systems engineering, drive technology, automation.



UNITRONIC® Data communication systems

The ideal brand for fast, trend-setting and reliable data transfer. **Key features:** UNITRONIC® are not only data lines, but also bus lines, which together with active sensor/actuator modules or gateways provide a perfect system for automation. **Fields of application:** Measurement, control, regulation, bus or LAN networks.



SKINTOP® Cable glands

The brand for quickly fastened, centred and hermetically sealed cable entries. **Key features:** Large clamping areas, optimum strain reliefs, wide range of versions such as SKINTOP® CLICK, COLD or CUBE. **Fields of application:** Everywhere, where cables must be fastened reliably and quickly.



ETHERLINE® Data communication systems for ETHERNET technology

The brand for network solutions, safety systems and firewalls in the industrial networking sector. **Key features:** System solutions consisting hardware, software, consulting, network design and support. **Fields of application:** Factory automation, renewable energy, building technology, structured cabling.



SILVYN® Protective cable conduit systems and cable carrier systems

The brand for all-round cable protection. **Key features:** The product range includes SILVYN® cable protection hoses for perfect protection against mechanical and chemical loads, along with SILVYN® CHAIN energy supply chains for highly dynamic applications. **Fields of application:** Everywhere where cables have to be additionally protected or routed.



HITRONIC® Optical transmission systems

The brand for split-second, fault-free, intercept-free data transport. **Key features:** The HITRONIC® product range includes fibre optic cables in a range of versions along with suitable accessories such as splice boxes, wall distributors or couplings. **Fields of application:** Office and industrial sector, renewable energy.



FLEXIMARK® Marking systems

The brand for permanent, clearly arranged cable markings. **Key features:** Comprehensive range – from manual labelling solutions to digital identification. Withstands high chemical, thermal and mechanical loads. **Fields of application:** All cable, single cores, control cabinets.



Welcome to the client specialist

Sometimes, more than 40,000 standard articles are just not enough. Apart from the standard assemblies in the mobility sector, Lapp Systems is a specialist within the Lapp Group for customised assemblies.

Cable and line systems

- Complete cable sets for mechanical & systems engineering, commercial-vehicle industry and lots more
- Prewired switching units for electronic and control systems
- Assembled single wires
- Ready-to-install connecting cables with special connectors
- Assembled optical fibres
- High-temperature cables with temperature-resistant special connectors

Spiral cables

- For trucks as supply and EBS/ABS coils
- As standard lines
- Made of lines specially assembled for the customer
- Spiral hoses with single wires and lines
- Special versions in cone shape

Energy supply systems

- Ready-to-install energy supply systems in plastic or metal versions. Also with hydraulic and pneumatic lines or mechanical joining technology

Special applications

- Wiring systems for robot applications
- Conductive fabric cable for energy and data systems

Extrusion

Do you require an extruded cable and connector system? With our modern machinery park, we offer the entire spectrum from conventional to hot-melt extrusion.

NEW: Spiral cable configurator: www.lappsystems.de/spiralkabel

Recharge with LAPP CHARGE

New environmentally-friendly mobility concepts, particularly emobility (hybrid and pure electric vehicles), are a megatrend. It is likely that a global mass market will develop within a few years – with completely new demands being made on vehicle wiring.

The Lapp Group can be considered a pioneer in emobility: the Lapp Group was one of the first companies to develop a complete, production-ready charging system with cables and a connection system – its LAPP CHARGE product meets all common safety standards. Its design and colour can be modified to suit a customer's requirements. Drivers of electric and plug-in hybrid cars are being won over by the charging system with its attractive and user-friendly design.

Holistic labelling system of the Lapp Group for „Lapp Charge“ charging cable systems, e. g.

Charge M3 T2P/T1C H 32A 1P 5000

| | |
|-----------------|---|
| Charge: | Product group |
| M3: | Variants: M2 = Mode2 M3 = Mode3 |
| T2P/T1C: | Examples: Infrastructure side/ vehicle side T2P = Type2 plug/ T1C = Type1 connector T2P = Type2 plug/ T2C = Type2 connector T3P = Type3 plug/ — = plain cut (open end) TFP = Type F Schuko/ T2C = Type 2 connector |

| | |
|--------------|---|
| H: | Variants: H = Helix S = Straight (straight) C = Coiled (spiralised) |
| 32A: | Variants: 16A 32A |
| 1P | Variants: 1P = 1-phase 3P = 3-phase |
| 5000: | Effective length (mm): Effective length between connectors respectively 1000 mm longer with only one connector. |



Customised connectors for emobility

In addition to products for the charging infrastructure, Lapp also supplies high-voltage cabling for the next generation of vehicles. These high-voltage cables are used in the vehicle interior and can be customised using different connection technologies. Lapp also has its own patented connection solution for use in this sector.

Lapp is already producing special system connections for use in the hybrid power pack of the new Mercedes-Benz S 400 Blue-HYBRID. These cables and connection systems are used inside the lithium-ion batteries and meet the high demands for applications in this industry. In addition, Lapp is an engineering partner for several well-known companies currently working on new battery systems which will store electrical energy more effectively.

For more information go to
www.lappsystems.de/emobility



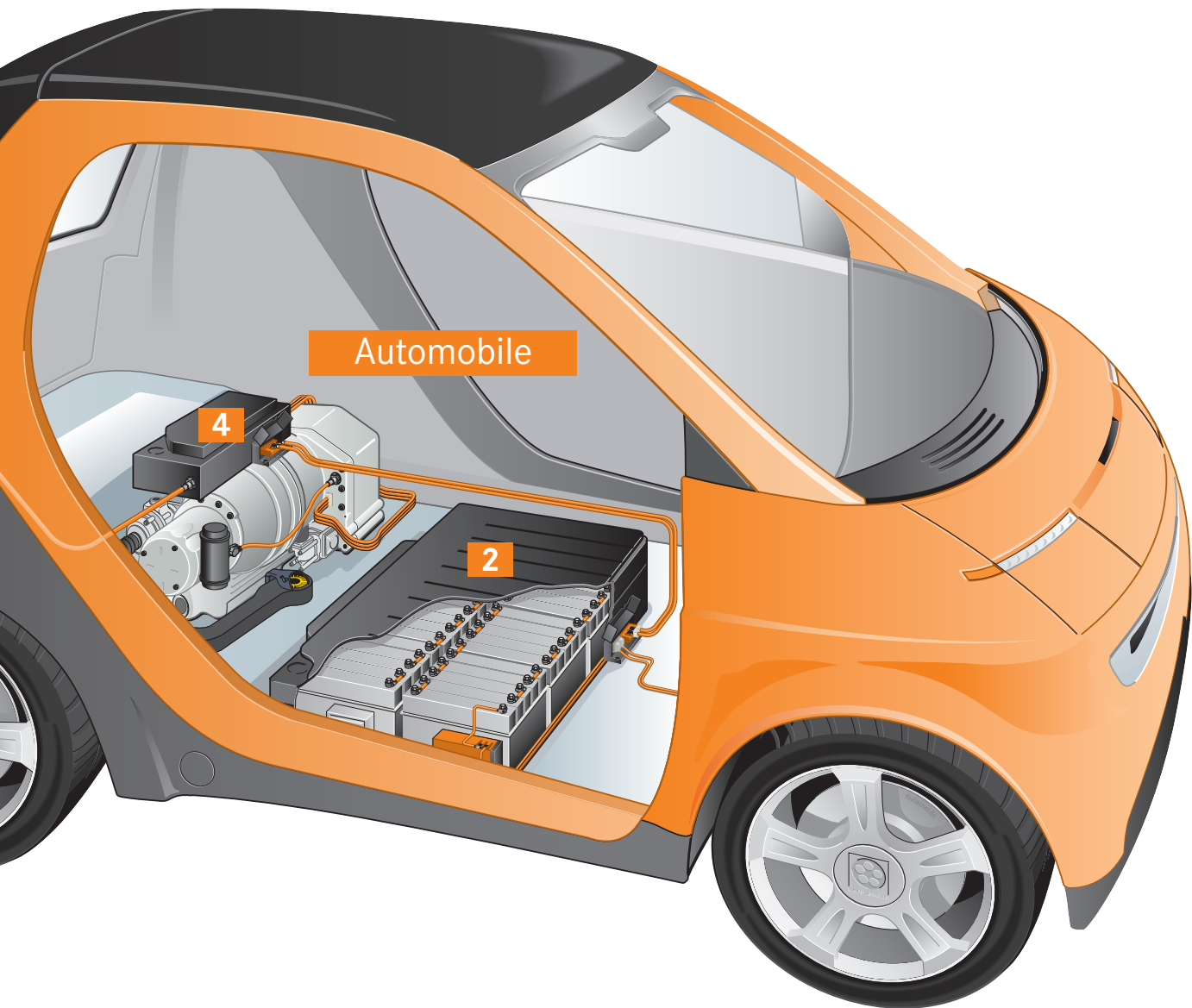
1 Charging cable and connector

- Mode 1 - 3 charging cable
- Type 1/2/3 connectors
- Special fully assembled products

2 Battery cabling

- Customer specific cables and connectors

Charging cable standard assemblies are available in the new charging cable configurator:
www.lappgroup.com/emobility-cablefinder



3 Charging station

- Charging socket and CP module in different configurations (on request)
- ÖLFLEX® CLASSIC Power- and control cables for diverse applications
- Control cabinet single cores
- ÖLFLEX® SPIRAL Spiralised connecting cables
- UNITRONIC® Data communication systems

- ETHERLINE® Data communication systems for ETHERNET-Technology
- SKINTOP® Cable glands
- Ground straps
- FLEXIMARK® Single core marking, Wrapping Labels, Marking systems

4 High voltage cabling

- ÖLFLEX® FD 90 CY Highly flexible, shielded single cores
- ÖLFLEX® HEAT Cable for expanded ambient temperature
- Customer specific cables and connectors



CHARGE M3 —/T2C S



Info

- For charging stations

CHARGE M3 —/T1C S



Info

- For charging stations

Benefits

CHARGE M3 —/T2C S

- Resistant to microbes
- Resistant to oil, dust and water
- Special cable design for a long service life
- Flexible at low temperatures
- Withstands high mechanical stress, in particular abrasion and sliding demands

CHARGE M3 —/T1C S

- New two-chamber system for environmental protection of moving parts to the connection part
- Resistant to oil, dust and water
- Special cable design for a long service life
- Flexible at low temperatures
- Withstands high mechanical stress, in particular abrasion and sliding demands

Application range

- For installation in charging stations

Design

CHARGE M3 —/T2C S

- Cable for 1-phase charging up to 20A: ÖLFLEX® Charge 3G2.5 mm²+1x0.5 mm²
- Cable for 3-phase charging up to 20A: ÖLFLEX® Charge 5G2.5mm²+1x0.5mm²
- Cable for 1-phase charging up to 32A: ÖLFLEX® Charge 3G6mm²+1x0,5mm²
- Cable for 3-phase charging up to 32 A: ÖLFLEX® Charge 5G6mm²+1x0.5mm²
- Type 2 connectors are injection moulded in two-components process for optimal ergonomics

CHARGE M3 —/T1C S

- Cable for 1-phase charging up to 20A: ÖLFLEX® Charge 3G2.5 mm²+1x0.5 mm²
- Cable for 1-phase charging up to 32A: ÖLFLEX® Charge 3G6mm²+1x0,5mm²

Technical data



Approvals
according to VDE-AR-E2283-5 according to EN 61851-1



Temperature range
Flexing: -30°C to +50°C

| Article number | Version | Effective length (mm) | Copper index kg/ 1.000 pieces | Weight (kg/ 1000 pieces) | PU |
|--|-----------------------|-----------------------|-------------------------------|--------------------------|----|
| Cut off clean, charging cable, vehicle connector type 2 (Total length: effective length +1m straight) | | | | | |
| 74880134 | Charging: 1 phase 20A | 5,000 | 483.0 | 1280 | 1 |
| 74880135 | Charging: 1 phase 20A | 7,000 | 637.0 | 1600 | 1 |
| 74880137 | Charging: 3 phase 20A | 5,000 | 786.0 | 1840 | 1 |
| 74880138 | Charging: 3 phase 20A | 7,000 | 1,036.0 | 2360 | 1 |
| 74880145 | Charging: 3 phase 32A | 5,000 | 1,843.0 | 2900 | 1 |
| 74880146 | Charging: 3 phase 32A | 7,000 | 2,429.0 | 3820 | 1 |
| 74880141 | Charging: 1 phase 32A | 5,000 | 1,120.0 | 2160 | 1 |
| 74880142 | Charging: 1 phase 32A | 7,000 | 1,476.0 | 2800 | 1 |
| Cut off clean, charging cable, vehicle connector type 1 (Total length: effective length +1m straight) | | | | | |
| 74880127 | Charging: 1 phase 20A | 5,000 | 487.0 | 1240 | 1 |
| 74880128 | Charging: 1 phase 32A | 7,000 | 641.0 | 1540 | 1 |
| 74880130 | Charging: 1 phase 32A | 5,000 | 1,129.0 | 2100 | 1 |
| 74880131 | Charging: 1 phase 32A | 7,000 | 1,485.0 | 2740 | 1 |

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Info

- For charging stations

CHARGE M3 —/T2C C



Info

- For charging stations

CHARGE M3 —/T1C C



Benefits

CHARGE M3 —/T2C C

- Resistant to microbes
- Resistant to oil, dust and water
- Special cable design for a long service life
- Flexible at low temperatures
- Withstands high mechanical stress, in particular abrasion and sliding demands

CHARGE M3 —/T1C C

- New two-chamber system for environmental protection of moving parts to the connection part
- Resistant to oil, dust and water
- Special cable design for a long service life
- Flexible at low temperatures
- Withstands high mechanical stress, in particular abrasion and sliding demands

Application range

- For installation in charging stations

Design

CHARGE M3 —/T2C C

- Cable for 1-phase charging up to 20A: ÖLFLEX® Charge 3G2.5 mm²+1x0.5 mm²
- Cable for 3-phase charging up to 20A: ÖLFLEX® Charge 5G2.5mm²+1x0.5mm²
- Cable for 1-phase charging up to 32A: ÖLFLEX® Charge 3G6mm²+1x0,5mm²
- Type 2 connectors are injection moulded in two-components process for optimal ergonomics

CHARGE M3 —/T1C C

- Cable for 1-phase charging up to 20A: ÖLFLEX® Charge 3G2.5 mm²+1x0.5 mm²
- Cable for 1-phase charging up to 32A: ÖLFLEX® Charge 3G6mm²+1x0,5mm²

Technical data



Approvals
according to VDE-AR-E2283-5
according to EN 61851-1



Temperature range
Flexing: -30°C to +50°C

| Article number | Version | Effective length (mm) | Copper index kg/1.000 pieces | Weight (kg/1000 pieces) | PU |
|---|-----------------------|-----------------------|------------------------------|-------------------------|----|
| Cut off clean, charging cable spiralized, vehicle connector type 2 (Total length: effective length +1m straight) | | | | | |
| 74880136 | Charging: 1 phase 20A | 5,000 | 1,074.0 | 2480 | 1 |
| 74880139 | Charging: 3 phase 20A | 5,000 | 1,861.0 | 4060 | 1 |
| 74880143 | Charging: 1 phase 32A | 5,000 | 2,633.0 | 4880 | 1 |
| Cut off clean, charging cable spiralized, vehicle connector type 1 (Total length: effective length +1m straight) | | | | | |
| 74880129 | Charging: 1 phase 20A | 5,000 | 1,078.0 | 2420 | 1 |
| 74880132 | Charging: 1 phase 32A | 5,000 | 2,642.0 | 4820 | 1 |

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Assembled cables

eMobility - Assembled charging cables



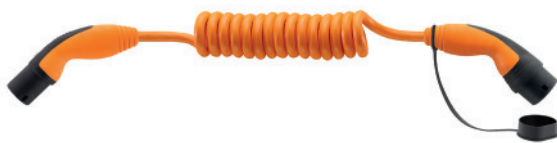
CHARGE M3 T2P/T2C S



Info

- For electric vehicles with type 2 vehicle inlet

CHARGE M3 T2P/T2C C



Info

- For electric vehicles with type 2 vehicle inlet

CHARGE M3 T2P/T2C H



Info

- For electric vehicles with type 2 vehicle inlet

Benefits

- Resistant to microbes
- Resistant to oil, dust and water
- Special cable design for a long service life
- Flexible at low temperatures
- Withstands high mechanical stress, in particular abrasion and sliding demands

Application range

- For charging stations, electric and Plug-in Hybrid vehicles

Design

- Cable for 1-phase charging up to 20A: ÖLFLEX® Charge 3G2.5 mm²+1x0.5 mm²
- Cable for 3-phase charging up to 20A: ÖLFLEX® Charge 5G2.5mm²+1x0.5mm²
- Cable for 1-phase charging up to 32A: ÖLFLEX® Charge 3G6mm²+1x0,5mm²
- Cable for 3-phase charging up to 32 A: ÖLFLEX® Charge 5G6mm²+1x0.5mm²
- Type 2 connectors are injection moulded in two-components process for optimal ergonomics

Technical data



Approvals
according to VDE-AR-E2283-5 according to EN 61851-1



Temperature range
Flexing: -30°C to +50°C

| Article number | Version | Effective length (mm) | Copper index kg/1.000 pieces | Weight (kg/ 1000 pieces) | PU |
|--|-----------------------|-----------------------|------------------------------|--------------------------|----|
| Plug type 2, Charging cable, vehicle connector type 2 | | | | | |
| 74880153 | Charging: 1 phase 20A | 5,000 | 413.0 | 1740 | 1 |
| 74880167 | Charging: 1 phase 20A | 7,000 | 567.0 | 2060 | 1 |
| 74880169 | Charging: 3 phase 20A | 5,000 | 673.0 | 2280 | 1 |
| 74880170 | Charging: 3 phase 20A | 7,000 | 923.0 | 2800 | 1 |
| 74880160 | Charging: 1 phase 32A | 5,000 | 958.0 | 2620 | 1 |
| 74880161 | Charging: 1 phase 32A | 7,000 | 1,314.0 | 3260 | 1 |
| 74880164 | Charging: 3 phase 32A | 5,000 | 1,576.0 | 3360 | 1 |
| 74880092 | Charging: 3 phase 32A | 7,000 | 2,162.0 | 4280 | 1 |
| Plug type 2, Charging cable spiralsised, vehicle connector type 2 | | | | | |
| 74880168 | Charging: 1 phase 20A | 5,000 | 1,005.0 | 2940 | 1 |
| 74880158 | Charging: 3 phase 20A | 5,000 | 1,748.0 | 4520 | 1 |
| 74880162 | Charging: 1 phase 32A | 5,000 | 2,471.0 | 5340 | 1 |
| Plug type 2, Charging cable Helix, vehicle connector type 2 | | | | | |
| 74880159 | Charging: 3 phase 20A | 5,000 | 694.0 | 2220 | 1 |
| 74880163 | Charging: 1 phase 32A | 5,000 | 988.0 | 2700 | 1 |

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Info

- For electric vehicles with type 1 vehicle inlet

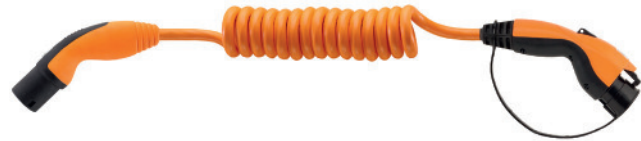
CHARGE M3 T2P/T1C S



Info

- For electric vehicles with type 1 vehicle inlet

CHARGE M3 T2P/T1C C



Info

- For electric vehicles with type 1 vehicle inlet

CHARGE M3 T2P/T1C H



Benefits

- New two-chamber system for environmental protection of moving parts to the connection part
- Resistant to oil, dust and water
- Special cable design for a long service life
- Flexible at low temperatures
- Withstands high mechanical stress, in particular abrasion and sliding demands

Application range

- For charging stations, electric and Plug-in Hybrid vehicles

Design

- Cable for 1-phase charging up to 20A: ÖLFLEX® Charge 3G2.5 mm²+1x0.5 mm²
- Cable for 1-phase charging up to 32A: ÖLFLEX® Charge 3G6mm²+1x0,5mm²
- Type 2 connectors are injection moulded in two-components process for optimal ergonomics

Technical data



Approvals
according to VDE-AR-E2283-5
according to EN 61851-1



Temperature range
Flexing: -30°C to +50°C

| Article number | Version | Effective length (mm) | Copper index kg/1.000 pieces | Weight (kg/1000 pieces) | PU |
|--|-----------------------|-----------------------|------------------------------|-------------------------|----|
| Plug type 2, charging cable, vehicle connector type 1 | | | | | |
| 74880152 | Charging: 1 phase 20A | 5,000 | 417.0 | 2740 | 1 |
| 74880147 | Charging: 1 phase 20A | 7,000 | 571.0 | 2000 | 1 |
| 74880149 | Charging: 1 phase 32A | 5,000 | 967.0 | 2560 | 1 |
| 74880093 | Charging: 1 phase 32A | 7,000 | 1,323.0 | 3200 | 1 |
| Plug type 2, charging cable spiralsised, vehicle connector type 1 | | | | | |
| 74880148 | Charging: 1 phase 20A | 5,000 | 1,008.0 | 2880 | 1 |
| 74880151 | Charging: 1 phase 32A | 5,000 | 2,480.0 | 5280 | 1 |
| Plug type 2, charging cable helix, vehicle connector type 1 | | | | | |
| 74880270 | Charging: 1 phase 32A | 5,000 | 988.0 | 2800 | 1 |

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Assembled cables

eMobility - Assembled charging cables



CHARGE M3 T3P/T2C S



Info

- For electric vehicles with type 2 vehicle inlet

CHARGE M3 T3P/T1C S



Info

- For electric vehicles with type 1 vehicle inlet

Benefits

CHARGE M3 T3P/T2C S

- Resistant to microbes
- Resistant to oil, dust and water
- Special cable design for a long service life
- Flexible at low temperatures
- Withstands high mechanical stress, in particular abrasion and sliding demands

CHARGE M3 T3P/T1C S

- New two-chamber system for environmental protection of moving parts to the connection part
- Resistant to oil, dust and water
- Special cable design for a long service life
- Flexible at low temperatures
- Withstands high mechanical stress, in particular abrasion and sliding demands

Application range

- For charging stations, electric and Plug-in Hybrid vehicles

Design

CHARGE M3 T3P/T2C S

- Cable for 1-phase charging up to 20A: ÖLFLEX® Charge 3G2.5 mm²+1x0.5 mm²
- Cable for 3-phase charging up to 20A: ÖLFLEX® Charge 5G2.5mm²+1x0.5mm²
- Cable for 1-phase charging up to 32A: ÖLFLEX® Charge 3G6mm²+1x0,5mm²
- Cable for 3-phase charging up to 32 A: ÖLFLEX® Charge 5G6mm²+1x0.5mm²
- Type 2 connectors are injection moulded in two-components process for optimal ergonomics

CHARGE M3 T3P/T1C S

- Cable for 1-phase charging up to 20A: ÖLFLEX® Charge 3G2.5 mm²+1x0.5 mm²
- Cable for 1-phase charging up to 32A: ÖLFLEX® Charge 3G6mm²+1x0,5mm²

Technical data



Approvals
according to VDE-AR-E2283-5
according to EN 61851-1



Temperature range
Flexing: -30°C to +50°C

| Article number | Version | Effective length (mm) | Copper index kg/1.000 pieces | Weight (kg/ 1000 pieces) | PU |
|--|-----------------------|-----------------------|------------------------------|--------------------------|----|
| Plug type 3, charging cable, vehicle connector type 2 | | | | | |
| 74880097 | Charging: 1 phase 20A | 5,000 | 411.0 | 1580 | 1 |
| 74880171 | Charging: 3 phase 20A | 5,000 | 669.0 | 2140 | 1 |
| 74880098 | Charging: 3 phase 32A | 5,000 | 1,568.0 | 3200 | 1 |
| 74880559 | Charging: 3 phase 32A | 7,000 | 2,154.0 | 4100 | 1 |
| Plug type 3, charging cable, vehicle connector type 1 | | | | | |
| 74880173 | Charging: 1 phase 20A | 5,000 | 415.0 | 1540 | 1 |
| 74880174 | Charging: 1 phase 32A | 5,000 | 961.0 | 2400 | 1 |

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Info

- Harnessing with In-Cable Control Box for charging mode 2 for electric vehicles with type 2 vehicle inlet

CHARGE M2 TFP/T2C S



Info

- Harnessing with In-Cable Control Box for charging mode 2 for electric vehicles with type 1 vehicle inlet

CHARGE M2 TFP/T1C S



Benefits

CHARGE M2 TFP/T2C S

- Resistant to microbes
- Resistant to oil, dust and water
- Special cable design for a long service life
- Flexible at low temperatures
- Withstands high mechanical stress, in particular abrasion and sliding demands

CHARGE M2 TFP/T1C S

- New two-chamber system for environmental protection of moving parts to the connection part
- Resistant to oil, dust and water
- Special cable design for a long service life
- Flexible at low temperatures
- Withstands high mechanical stress, in particular abrasion and sliding demands

Product features

- Charging current from 6-13A in 5 steps
- Monitoring of protective earth conductor
- PUR outer sheath
- Suitable for all weather conditions

Design

- H07BQ-F: Cable from Typ F plug up to ICCB
- Type 2 connectors are injection moulded in two-components process for optimal ergonomics
- Type F cable connectors are injection moulded

Technical data

DIN VDE Approvals
according to VDE-AR-E2283-5
according to EN 61851-1

Temperature range
Flexing: -30°C to +50°C

Application range

- For charging stations, electric and Plug-in Hybrid vehicles

| Article number | Version | Effective length (mm) | Copper index kg/1.000 pieces | Weight (kg/1000 pieces) | PU |
|--|-----------------------|-----------------------|------------------------------|-------------------------|----|
| Plug type F, charging cable with ICCB, vehicle connector type 2 | | | | | |
| 74880085 | Charging: 1-phase 13A | 4,000 | 344.0 | 2570 | 1 |
| Plug type F, charging cable with ICCB, vehicle connector type 1 | | | | | |
| 74880086 | Charging: 1-phase 13A | 4,000 | 344.0 | 2570 | 1 |

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Socket outlet Type 2 IP54 up to 63A and connector locking flat



 Info

- Sturdy and durable socket outlet for frequent connection

Socket outlet Type 2 IP54 up to 63A with cover and connector locking



 Info

- Sturdy and durable socket outlet for frequent connection

Socket outlet Type 2 IP54 up to 63A with RGB LED as well as cover and connector locking



 Info

- Sturdy and durable socket outlet for frequent connection

Socket outlet Type 2 IP54 up to 63A and connector locking



Info

- Sturdy and durable socket outlet for frequent connection



Socket outlet Type 2 IP54 up to 63A with RGB LED and connector locking



Info

- Sturdy and durable socket outlet for frequent connection



Benefits

- Socket outlet and controller fits perfectly together

Application range

- For installation in charging stations

Product features

- 5 different versions for all installation situations
- Socket outlet type 2 according to IEC62196-1,2 and IEC 61851-1
- Optionally available: Hinged lid locking, RGB LED, flat design

Design

- Screw terminals for 3P+N+PE as well as PP and CP
- With easy CONTACT and silver plated contacts
- Plug interlock with integrated actuator
- Hinged lid included

Technical data

- Nominal voltage**
200/346V 240/415V
- Protection rating**
IP 54
- Temperature range**
-30°C up to +50°C

| Article number | Charging current | Suitable EVCP2 Controller | PU |
|---|------------------|---------------------------------------|----|
| Socket outlet type 2 flat | | | |
| 74880200 | bis 20A | EVCP2 Controller 74880215 or 74880218 | 1 |
| 74880201 | bis 32A | EVCP2 Controller 74880215 or 74880218 | 1 |
| 74880202 | bis 63A | EVCP2 Controller 74880215 or 74880218 | 1 |
| Socket outlet type 2 with hinged lid locking | | | |
| 74880203 | bis 20A | EVCP2 Controller 74880217 or 74880220 | 1 |
| 74880204 | bis 32A | EVCP2 Controller 74880217 or 74880220 | 1 |
| 74880205 | bis 63A | EVCP2 Controller 74880217 or 74880220 | 1 |
| Socket outlet type 2 with hinged lid locking and RGB LED | | | |
| 74880206 | bis 20A | EVCP2 Controller 74880217 or 74880220 | 1 |
| 74880207 | bis 32A | EVCP2 Controller 74880217 or 74880220 | 1 |
| 74880208 | bis 63A | EVCP2 Controller 74880217 or 74880220 | 1 |
| Socket outlet type 2 | | | |
| 74880209 | bis 20A | EVCP2 Controller 74880215 or 74880218 | 1 |
| 74880210 | bis 32A | EVCP2 Controller 74880215 or 74880218 | 1 |
| 74880211 | bis 63A | EVCP2 Controller 74880215 or 74880218 | 1 |
| Socket outlet type 2 with RGB LED | | | |
| 74880212 | bis 20A | EVCP2 Controller 74880215 or 74880218 | 1 |
| 74880213 | bis 32A | EVCP2 Controller 74880215 or 74880218 | 1 |
| 74880214 | bis 63A | EVCP2 Controller 74880215 or 74880218 | 1 |

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EVCP2 Controller Mode 3/ Typ 2



Benefits

- For safe and continuous charging
- Power reserve for plug release in case of power failure
- Additional 12V outputs for peripherals

Product features

- Integrated power supply unit 230V/12V with power supply in case of power failure
- Adjustable charging current of 6A-80A by means of rotary switch
- For each type 2 socket outlet EVCP2 one controller is necessary
- Possibility to control the RGB LED lighting
- Control of charging contactor and connector lock



Info

- For optimal control of the type 2 socket outlets

Technical data

- Nominal voltage**
95 ... 265 V AC
- Protection rating**
IP 30
- Temperature range**
Operation: -20 °C to +70 °C

| Article number | Article designation | PU |
|---|--|----|
| EVCP2 Controller Mode 3 / Type 2 | | |
| 74880215 | Standard + query via RS485 | 1 |
| 74880216 | Vehicle connector firmly connected to EVSE, suitable for type 1 and type 2, query via RS485 | 1 |
| 74880217 | Standard + query via RS485 + hinged lid locking + limit switch | 1 |
| 74880218 | Standard + query via RS485 + analog input | 1 |
| 74880219 | Vehicle connector firmly connected to EVSE, suitable for Type 1 and Type 2, query via RS485 + analog input | 1 |
| 74880220 | Standard + query via RS485 + hinged lid locking + limit switch + analog input | 1 |
| Software for EVCP2 controllers including manual | | |
| 74880221 | To adjust and for query via RS232 / RS485 | 1 |
| Connecting cable for plug and hinged lid locking | | |
| 74880222 | Acuator coupler with single cores 3x0.5, length 1000mm | 1 |

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New

Vehicle connector Type 1 up to 32A



Benefits

- Dust cover enclosed
- New two-chamber system for environmental protection of moving parts to the connection part

Product features

- Suitable for field assembly

Design

- L1+L2/N+PE and CP+CS



Info

- Field harnessable

Technical data

- Nominal voltage**
200-250V
- Protection rating**
IP 44
- Temperature range**
-30 °C up to +50 °C

| Article number | Article designation | PU |
|---|------------------------------|----|
| Vehicle connector Type 1 up to 32A | | |
| 74880223 | Vehicle connector Type 1 20A | 1 |
| 74880224 | Vehicle connector Type 1 32A | 1 |

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New

Plug Type 2 up to 63A



Info

- Field harnessable

Technical data

- Nominal voltage**
200-250V (1p+N+PE)
200/380-250/480V (3p+N+PE)
- Protection rating**
IP 44
- Temperature range**
-30°C up to +50°C

- Benefits**
 - With integrated resistance coding
- Product features**
 - Suitable for field assembly

| Article number | Article designation | PU |
|------------------------------|---------------------------|----|
| Plug Type 2 up to 63A | | |
| 74880225 | Plug type 2, 20A, 1-phase | 1 |
| 74880226 | Plug type 2, 32A, 1-phase | 1 |
| 74880227 | Plug Type 2, 32A, 3-phase | 1 |
| 74880228 | Plug type 2, 32A, 3-phase | 1 |
| 74880229 | Plug type 2, 63A, 3-phase | 1 |

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New

Vehicle connector Type 2 up to 63A



Info

- Field harnessable

Technical data

- Nominal voltage**
200-250V (1p+N+PE)
200/380-250/480V (3p+N+PE)
- Protection rating**
IP 44
- Temperature range**
-30°C up to +50°C

- Benefits**
 - With integrated resistance coding
 - Dust cover enclosed
- Product features**
 - Suitable for field assembly

| Article number | Article designation | PU |
|---|--|----|
| Vehicle connector Type 2 up to 63A | | |
| 74880230 | Vehicle connector type 2, 20A, 1-phase | 1 |
| 74880231 | Vehicle connector type 2, 32A, 1-phase | 1 |
| 74880232 | Vehicle connector type 2, 20A, 3-phase | 1 |
| 74880233 | Vehicle connector type 2, 32A, 3-phase | 1 |
| 74880234 | Vehicle connector type 2, 63A, 3-phase | 1 |

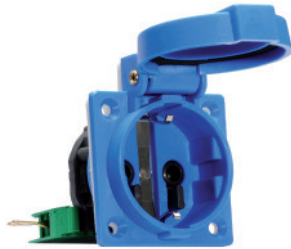
Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request. Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T 17 for the definition and calculation of copper-related surcharges. Photographs are not to scale and do not represent detailed images of the respective products.

Assembled cables

eMobility - System components



Socket outlet ground receptacle 16A 230V, German System



Benefits

- With auxiliary contact “closing”

Application range

- For installation in charging stations

Product features

- Suitable for field assembly



Info

- Suitable for 16A continuous load

Technical data

Nominal voltage
250V

Protection rating
IP 54

Temperature range
-30°C up to +50°C

| Article number | Article designation | PU |
|--|----------------------------|----|
| Socket outlet ground receptacle 16A 230V, German System | | |
| 74880235 | Socket outlet colour blue | 1 |
| 74880236 | Socket outlet black colour | 1 |

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Socket outlet ground receptacle 16A 230V, German System



Benefits

- With auxiliary contact “closing”

Application range

- For installation in charging stations

Product features

- Suitable for field assembly
- Without hinged cover



Info

- Suitable for 16A continuous load

Technical data

Nominal voltage
250V

Protection rating
IP 40

Temperature range
-30°C up to +50°C

| Article number | Article designation | PU |
|--|----------------------------|----|
| Socket outlet ground receptacle 16A 230V, German System | | |
| 74880237 | Socket outlet colour blue | 1 |
| 74880238 | Socket outlet black colour | 1 |

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Socket outlet ground receptacle 16A 230V, Belgian/French System

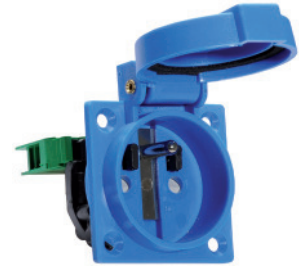
Info

- Suitable for 16A continuous load

Technical data

- Nominal voltage**
250V
- Protection rating**
IP 54
- Temperature range**
-30°C up to +50°C

- Benefits**
 - With auxiliary contact "closing"
- Application range**
 - For installation in charging stations
- Product features**
 - Suitable for field assembly



| Article number | Article designation | PU |
|--|----------------------------|----|
| Socket outlet ground receptacle 16A 230V, Belgian/French System | | |
| 74880239 | Socket outlet colour blue | 1 |
| 74880240 | Socket outlet black colour | 1 |

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Socket outlet Type 23, Swiss System

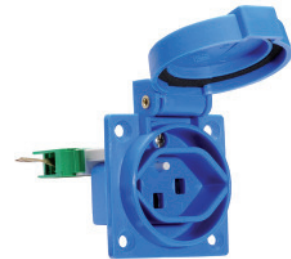
Info

- Suitable for 16A continuous load

Technical data

- Nominal voltage**
250V
- Protection rating**
IP 54
- Temperature range**
-30°C up to +50°C

- Benefits**
 - With auxiliary contact "closing"
- Application range**
 - For installation in charging stations
- Product features**
 - Suitable for field assembly



| Article number | Article designation | PU |
|--|----------------------------|----|
| Socket outlet Type 23, Swiss System | | |
| 74880241 | Socket outlet colour blue | 1 |
| 74880242 | Socket outlet black colour | 1 |

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Assembled cables

eMobility - System components



Socket outlet ground receptacle with flat design



Benefits

- With auxiliary contact “closing”

Application range

- For installation in charging stations

Product features

- Suitable for field assembly



Info

- Suitable for 16A continuous load

Technical data

Nominal voltage
250V

Protection rating
IP 44

Temperature range
-30°C up to +50°C

| Article number | Article designation | PU |
|---|-------------------------|----|
| Socket outlet ground receptacle with flat design | | |
| 74880243 | German system | 1 |
| 74880244 | Belgian / French system | 1 |
| 74880245 | Swiss system | 1 |

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Socket outlet ground receptacle with hinged cover locking



Benefits

- With auxiliary contact “closing”

Application range

- For installation in charging stations

Product features

- Suitable for field assembly



Info

- Suitable for 16A continuous load

Technical data

Nominal voltage
250V

Protection rating
IP 44

Temperature range
-30°C up to +50°C

| Article number | Article designation | PU |
|--|-------------------------|----|
| Socket outlet ground receptacle with hinged cover locking | | |
| 74880246 | German system | 1 |
| 74880247 | Belgian / French system | 1 |
| 74880248 | Swiss system | 1 |

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Socket outlet ground receptacle with hinged cover locking and LED

Info

- Suitable for 16A continuous load

Technical data

- Nominal voltage**
250V
- Protection rating**
IP 44
- Temperature range**
-30°C up to +50°C

- Benefits**
 - With auxiliary contact “closing”
- Application range**
 - For installation in charging stations
- Product features**
 - Suitable for field assembly



| Article number | Article designation | PU |
|--|-------------------------|----|
| Socket outlet ground receptacle with hinged cover locking and LED | | |
| 74880249 | German system | 1 |
| 74880250 | Belgian / French system | 1 |
| 74880251 | Swiss system | 1 |

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Socket outlet ground receptacle

Info

- Suitable for 16A continuous load

Technical data

- Nominal voltage**
250V
- Protection rating**
IP 44
- Temperature range**
-30°C up to +50°C

- Benefits**
 - With auxiliary contact “closing”
- Application range**
 - For installation in charging stations
- Product features**
 - Suitable for field assembly



| Article number | Article designation | PU |
|--|-------------------------|----|
| Socket outlet ground receptacle | | |
| 74880252 | German system | 1 |
| 74880253 | Belgian / French system | 1 |
| 74880254 | Swiss system | 1 |

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Assembled cables

eMobility - System components



Socket outlet ground receptacle with LED



Benefits

- With auxiliary contact “closing”

Application range

- For installation in charging stations

Product features

- Suitable for field assembly



Info

- Suitable for 16A continuous load

Technical data

Nominal voltage
250V

Protection rating
IP 44

Temperature range
-30°C up to +50°C

| Article number | Article designation | PU |
|---|-------------------------|----|
| Socket outlet ground receptacle with LED | | |
| 74880255 | German system | 1 |
| 74880256 | Belgian / French system | 1 |
| 74880257 | Swiss system | 1 |

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Socket outlet CEE 3-way 230V



Benefits

- With inclination

Application range

- For installation in charging stations

Product features

- Suitable for field assembly



Info

- With auxiliary contact “closing” and “break”

Technical data

Nominal voltage
200-250V

Protection rating
IP 54

Temperature range
-30°C up to +50°C

| Article number | Article designation | PU |
|-------------------------------------|---------------------|----|
| Socket outlet CEE 3-way 230V | | |
| 74880258 | 16A | 1 |
| 74880259 | 32A | 1 |

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Socket outlet CEE 5-way 400V

Info

- With auxiliary contact "closing" and "break"

Technical data

- Nominal voltage**
200-250V / 380-415V
- Protection rating**
IP 54
- Temperature range**
-30°C up to +50°C

- Benefits**
 - With inclination
- Application range**
 - For installation in charging stations
- Product features**
 - Suitable for field assembly



| Article number | Article designation | PU |
|-------------------------------------|---------------------|----|
| Socket outlet CEE 5-way 400V | | |
| 74880260 | 16A | 1 |
| 74880261 | 32A | 1 |

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New

ÖLFLEX® CHARGE

VDE EVC cable to charge electrically powered vehicles and for spiralization

LAPP KABEL STUTTGART ÖLFLEX® CHARGE EVC 3G6+0,5 450/750 VAC VDE-Reg. 8727 RoHS CE

Info

- VDE EVC type certified
- Halogen-free and flame-retardant
- Spiralizable

Benefits

- Normative compliance of the charging process with IEC 61851-1
- VDE EVC certified according to VDE-AR-E 2283-5/ EVC cable type as third-party approved component involved in charging
- Low toxicity of flue in the event of fire
- Permanent connection as flexible charging cable to charging station or for permanent on-board carriage inside vehicles
- Suitable for spiralization, except for 5G6mm²+1X0.5mm²

Product features

- Flame-retardant acc. IEC 60332-1-2 as well as Halogen-free acc. VDE-AR-E 2283-5/ appendices B+C, EN 50267-2-1, EN 50267-2-2, EN 50525-1/ appendix C, EN 60684-2
- UV-resistant acc. EN ISO 4892-2, 2.4.20, as well as ozone-resistant acc. EN 50396, 8.1.3, for outdoor use
- Cold-flexible as well as water-resistant according to AD6 of HD 516 and VDE-AR-E 2283-5, appendix I
- Resistance to acids and solutions according to EN 60811
- High resistance to usual vehicle chemicals according to VDE-AR-E 2283-5, appendix G

Norm references / Approvals

- <VDE> EVC cable type registration issued by the VDE according to the VDE application rule VDE-AR-E 2283-5

Design

- Finely stranded, bare copper conductors of IEC conductor class 5 acc. IEC 60228
- Core insulations of power cores made of special, halogen-free, cross-linked elastomer EVI-2 acc. VDE-AR-E 2283-5
- Core insulation control/ pilot core(s): Halogen-free, thermoplastic, special compound EVI-1 acc. VDE-AR-E 2283-5
- Halogen-free, outer sheath made of PUR in compliance with the normative compound EVM-1 acc. VDE-AR-E 2283-5
- Colour of the outer sheath: Orange similar to RAL 2003, further sheath colours on request

Technical data

- Core identification code**
Power cores: colour-coded according to HD 308/VDE 0293-308
Control/ Pilot core: Red
- Conductor stranding**
Fine-wired/ Finely stranded according to IEC 60228, conductor class 5
Bare copper
- Minimum bending radius**
10 x outer diameter
- Nominal voltage**
U₀/U = 450/750 V AC
- Test voltage**
At the core: 2.5 kV AC
At the finished cable: 3 kV AC
- Protective conductor**
Always with protective conductor (PE), hence uppercase "G" as part of the dimension abbreviation
- Temperature range**
-25 °C to +80 °C
Maximum permissible conductor temperature: +90 °C

| Article number | Number of cores and mm ² per conductor | Outer diameter (mm) | Copper index (kg/km) | Weight (kg/km) |
|-----------------------|---|---------------------|----------------------|----------------|
| ÖLFLEX® CHARGE | | | | |
| 74880550 | 3G2,5+1X0,5 | 10.1 | 76.8 | 155 |
| 74880558 | 3G6+1X0,5 | 13.2 | 178.0 | 330 |

| Article number | Number of cores and mm ² per conductor | Outer diameter (mm) | Copper index (kg/km) | Weight (kg/km) |
|----------------|---|---------------------|----------------------|----------------|
| 74880574 | 5G2,5+1X0,5 | 12.8 | 125.0 | 260 |
| 74880582 | 5G6+1X0,5 | 16.0 | 293.0 | 460 |

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The following applies for the use of our products

The conformity of our products to the relevant European directives and compliance with the provisions contained therein shall be indicated by the CE marking.

The safety of our products is closely associated with how they are used. A knowledge of and adherence to the respective international/national standards of use (e.g. DIN VDE 0100; 0298)

are mandatory. There are particular risks if installed improperly. This applies to all our products/items:

Processing is only to be done by an authorised electrician! Otherwise, there is the risk of an electric shock or a fire ignited by electric current!

Safety

Without exception, our products are tested for application safety in accordance with defined standards and our own regulations, which complement the standards. Relevant legal requirements and safety regulations are also observed. Provided due care and attention is paid, the possibility of product-specific danger to the user may thus reasonably be excluded. Where products are used carelessly or incorrectly, however, considerable

danger to persons and the environment may arise. For this reason, our cables must only be processed and/or used responsibly by trained electricians or specialists. This catalogue contains general information for the application of each product. Independent of such information, the application standards DIN VDE 0298 and DIN VDE 0891 for cables will apply. Excerpts from these standards, as well as complementary selection

and application tables, design and installation guidelines, are contained in the tables in the appendix to the current main catalogue. Our machines and installation tools are – where necessary – designed in accordance with the machine guidelines and display the CE identification mark. It must be noted, however, that our machines and installation tools must only be used by trained specialist personnel and for the purpose for which they

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